realindex INVESTMENTS

# Inflation and Value Redux:

# The Events of 2022


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**For Retail Adviser Use Only**

Late in 2021 we published a Realinsights paper on the long term relationship between inflation and Value style investing. In that paper, we focused especially on whether the recent (and forecast) inflation spike we were seeing on the back of the COVID lockdown and stimulus packages would drive outperformance of Value in the near future.

A lot has happened since then.

Here we revisit some of our thoughts from that paper, and look at the more recent performance of Value[1] in the face of (a) the Russia-Ukraine conflict, (b) high realised and anticipated inflation, and (c) the risk of a global recession.

Our main conclusions are:

- Interest rates are likely to continue to rise, but they are probably ineffective against the supply side inflation pressures we are seeing at the moment
- Inflation has increased due first to post-COVID stimulus, then due to the onset of the Russian-Ukraine conflict, and finally due to supply chain restrictions driven by the lock down of two of the world's largest shipping ports (and China's largest cities) in a bid to combat an outbreak of COVID.
- Inflation commentary has moved from "transient" to "temporary" to "sticky" and is now approaching "entrenched" at a fast clip.[2]
- Risk of a global recession has increased, but central banks are not uniform in this prediction. We are seeing many signs of slowing growth, while inflation is increasing. The risk of the dreaded "stagflation" is increasing (where prices rise but economic growth falters).

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[1] A value stock is a security trading at a lower price than what the company's performance may otherwise indicate.

[2] See for example, https://www.schroders.com/en/gr/professional-investor/insights/economics/how-us-inflation-became-entrenched-in-the-system/ or https://www.businessinsider.com/inflation-sticky-prices-price-drops-pce-index-economy-2022-2

- Value has performed very well during this period of uncertainty, which coincides with (but is not entirely driven by) higher inflation. Very expensive Growth[3] stocks, hit both by slowing growth and by inability to source materials, have sold off significantly.
- Value should continue to do well for some time (or Growth will do poorly), as the issues with supply of goods are unlikely to be resolved any time soon, and the knock-on impacts will take some time to filter through.

## Some Background from our previous paper

Many of the conclusions and much of the information reported in the earlier paper are now out of date or inaccurate, or both. For example, guidance from the RBA in Australia was that interest rate rises were unlikely until 2023. At the beginning of May 2022, the RBA raised its cash rate by 25bps, the first rise in more than 11 years.

Historically, US inflation was quite volatile until the early 1980s when a regime of inflation control or targeting was put in place by the Fed. There has long been an anecdotal positive relationship between Value returns and inflation, but as we noted in the earlier paper, much of this stems from the earlier period.

The chart below (taken from the earlier paper) shows a long history of US inflation, and the return spread between Value and Growth over the same period. While it is clear that Value has outperformed during some periods of high inflation, from time to time Growth has also outperformed during these periods. In lower inflation periods, Value is less likely to outperform Growth (especially during the last decade or so), but is by no means a certain or especially strong relationship.

There are some good reasons why Value can do better during higher inflation periods, and these map well into today's volatile environment. Higher anticipated or expected inflation tends to mean that future cash flows are worth less in present value terms – the so-called "duration effect". Growth stocks tend to be priced at higher valuation multiples than value stocks as the market is willing to "pay up" for growth into the more distant future.

With a fall in the present value of those distant future cash flows, Growth stocks tend to fall in value. Further, higher inflation periods are from time to time associated with declining economic growth – which is indeed the case at the moment. Declining economic growth maps directly into the values of Growth stocks that price this in – as a result, they sell off and Value performs better.

Finally, in the recent past, Growth stocks have been trading at very high valuation multiples[4] compared to history – that is, trading at very expensive levels - and so have a great deal further to fall than in a more normal market.

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[3] A growth stock is any share in a company that is anticipated to grow at a rate significantly above the average growth for the market

[4] Valuation multiples refers to ratios that compare specific financial metrics. This financial measurement tool reflects the valuation of a company and allows for comparisons between different companies.

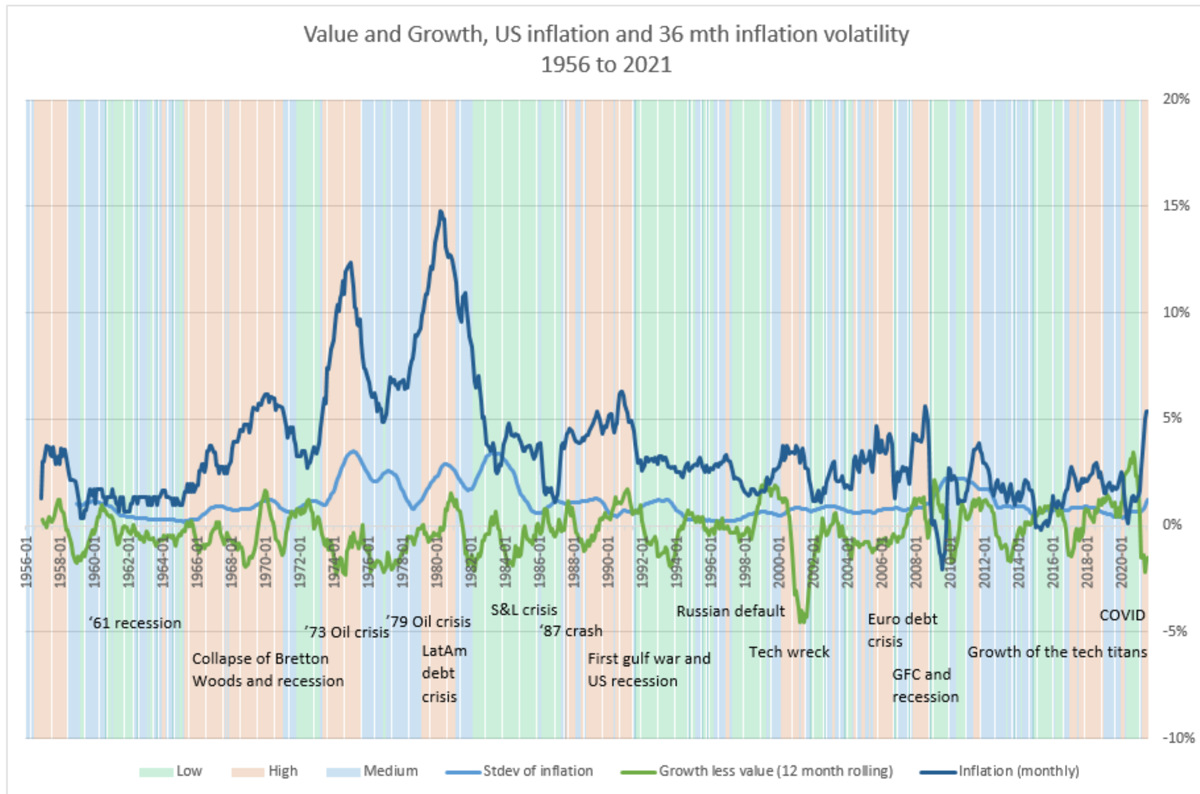


Chart 1: History of Inflation and the Value-Growth Spread

Source: HML data from https://mba.tuck.dartmouth.edu/pages/faculty/ken.french/data_library.html , inflation data from https://data.oecd.org/price/inflation-cpi.htm

## Recent Events

By 'recent events' we mean the Russia-Ukraine conflict and the Shanghai and Shenzhen lockdowns in China. Following on from the COVID related economic slowdown and then stimulus, the war in Ukraine has had a major impact on the global supply chain and on inflation. Combined, these have led to an increased risk of global recession and driven up prices. Then, when Shanghai and Shenzhen were locked down again to reduce or prevent the spread of COVID, the resulting shutdown of their ports has seriously disrupted global shipping and supply chain that were already under pressure.

### Supply Chain

Supply chain issues have arisen due to disruptions to shipping and overloaded ports[5], inventory rundown and (perversely) warehouses that cannot be emptied, and land-based transport (trucking) struggling to find vehicles and drivers. This has meant actual delivery of goods has been severely hampered.[6]

[5] One in five container ships is now stuck in ports globally: https://fortune.com/2022/04/23/china-lockdowns-inflation-supply-chain-nightmare-shanghai/

[6] https://cacm.acm.org/magazines/2022/4/259394-global-supply-chain-disruption-and-resilience/fulltext

Adding to this, Shanghai (which has the largest port by volume) has been in lockdown since March 28 (five weeks at time of writing) and Shenzhen (fourth largest port globally and China's tech hub) has just returned from COVID lockdown after four weeks. As much as 30% of the ships stuck in ports are at these two centres. This has created ongoing supply issues with foodstuffs[7] (meat, sunflower oil), apparel and semiconductors (chips).

With a sense of timing not usually observed in economic policy bodies, in Jan 2022 the NY Fed launched the Global Supply Chain Pressure Index (GSCPI) through its Liberty Street Economics economic research arm.[8] This measure takes data for twenty seven (27) variables from a variety of sources (Baltic Dry Index, Harpex Index, US Bureau of Labor Statistics (BLS) transport cost price indices and Purchase Manager Index (PMI surveys)) and aggregates them to provide a single measure. This data is available through history, so has been backfilled to 1997. Further it is scored in such a way that zero represents a neutral pressure – in effect the long term average. The chart below shows this pressure index from inception to Feb 2022 (most recent data) showing the drastic change we have seen since the beginning of COVID. This data does not include the impact of the Russia-Ukraine conflict, nor the China port lockdowns, so we can only imagine it will be much higher from here.

Chart 2: Global Supply Chain Pressure Index (GSCPI) to Feb 2022

Source: https://www.dataphyte.com/latest-reports/economy/global-supply-is-still-under-post-covid19-lockdown-pressure/

Further, freight sitting on stationary ships rose strongly during COVID but has not fallen back to the end of April, as the chart below shows.

[7] https://www.cbsnews.com/news/product-shortages-inflation-supply-chain-2022/
[8] https://libertystreeteconomics.newyorkfed.org/2022/01/a-new-barometer-of-global-supply-chain-pressures/

**Freight on stationary ships**
Last Update: 04.05.2022

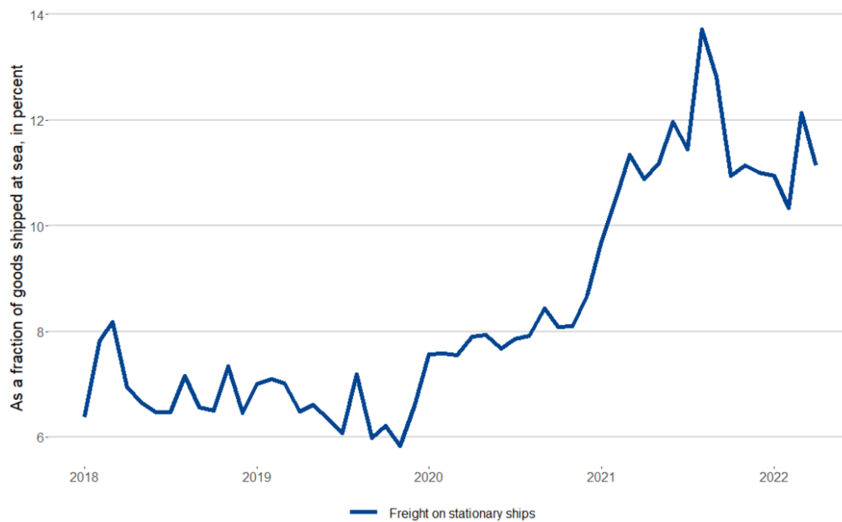


Chart 3: Freight on Stationary Ships

Source: [https://www.ifw-kiel.de/topics/international-trade/kiel-trade-indicator/](https://www.ifw-kiel.de/topics/international-trade/kiel-trade-indicator/)

It's not all bad news however. There is some evidence to suggest that global shipping traffic is recovering. The chart below shows that while the volume of shipping through the port of Shanghai during its lockdown has been sharp, container load through other Chinese ports has increased, suggesting that goods are indeed leaving China.

**Departing Container Load from China and Shanghai**
Comparison to start of the year. Last Update: 04.05.2022

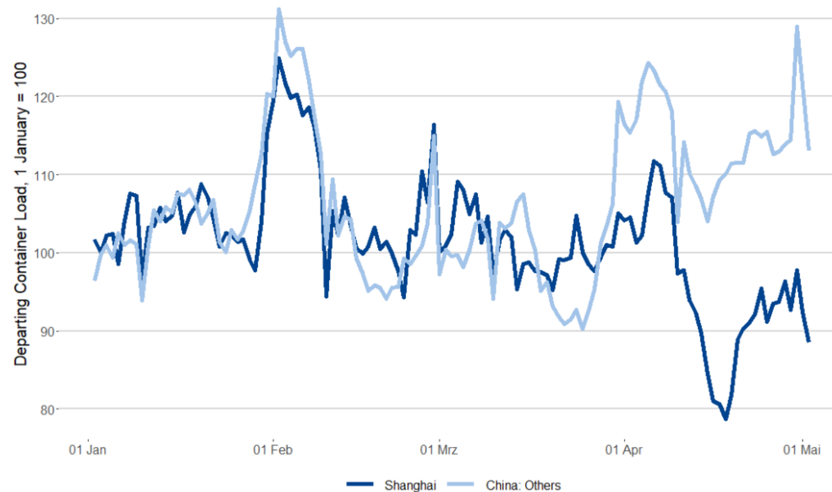


Chart 4: Freight leaving Shanghai vs other Chinese ports

Source: https://www.ifw-kiel.de/topics/international-trade/kiel-trade-indicator/

One final comment: transport costs represent about 7.7% of global GDP.[9] Any increase in costs will map directly and forcefully onto price inflation.

**Inflation**

Inflation was already high following post-COVID stimulus packages, and has jumped further. Supply of many commodities and other goods that would normally be sourced from Ukraine or Russia has ceased or become seriously restricted. Combined with the supply chain issues and steadily increasing demand, prices for many essential commodities have jumped sharply. Greatest among these is the price of energy, especially gas supplied to Western Europe[10], but prices for agricultural commodities like wheat have picked up sharply.

Russian gas exports count for very large proportions of gas usage within most of the EU. For many companies that cannot import from elsewhere, or have no domestic source, it can be 100% of gas imported. In the absence of a viable alternative supply, something that is probably some years away from being operational, gas prices will remain high and this will pass costs on down the chain.

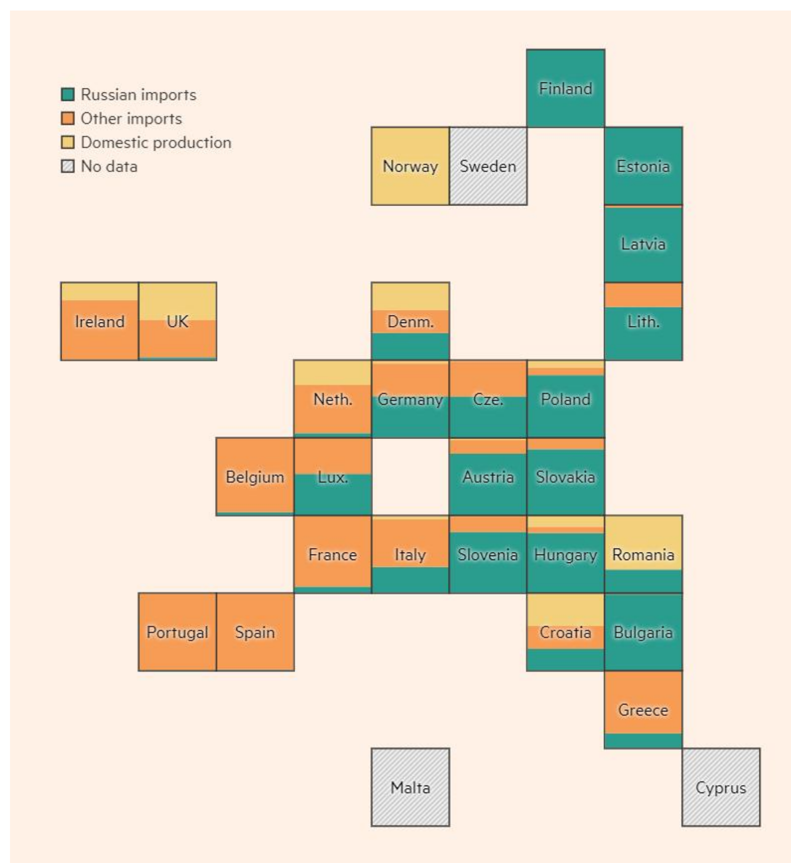


Chart 5: FT Breakdown of EU Country Dependence on Russian Gas

Source: https://ig.ft.com/europes-race-to-replace-russian-gas/

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[9] https://fortune.com/2022/04/23/china-lockdowns-inflation-supply-chain-nightmare-shanghai/, https://data.bts.gov/stories/s/Transportation-Economic-Trends-Contribution-of-Tra/pgc3-e7j9/

[10] https://ig.ft.com/europes-race-to-replace-russian-gas/

As an aside: Note that Russian oil is still being bought by the West. Since the start of the war, the West has paid €35bn for Russian oil, while spending only €1bn for Ukraine's defence.[11] Much of the Russian oil exports by tanker to Europe are now to "unknown" destinations[12] – that is, without a known destination, not a voyage to nowhere. These tankers are usually unloaded at sea, rather than in a port. European countries are desperate for oil, but are aware of the political fallout, so their suppliers and oil companies are motivated to keep the destination quiet.

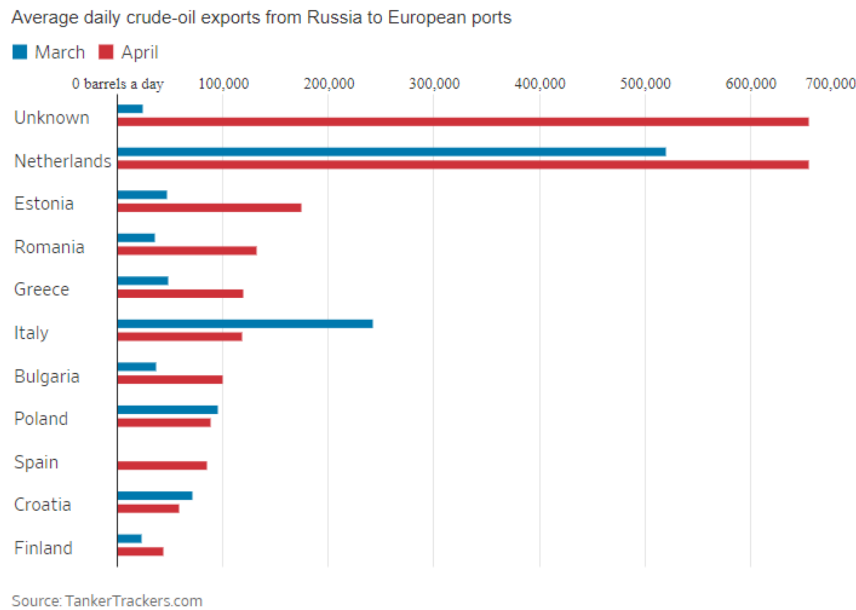



Chart 6: "Unknown" Destination Oil Shipping

Source: https://www.wsj.com/articles/russian-oil-flows-but-increasingly-under-the-radar-11650541684, https://www.wsj.com/articles/why-does-the-u-s-still-buy-russian-oil-11646151935?mod=article_inline

Wheat from Russia and Ukraine is a mainstay of imports into many countries, as the graphic below shows. Russian (third largest country) and Ukrainian (ninth largest) wheat production combined are about 13% of global production, and the countries are the dominant supplier of wheat to others, especially in the Middle East[13]

[11] https://www.theguardian.com/world/2022/apr/06/1bn-for-ukraine-35bn-for-russian-energy-eu-chief-calls-out-funding-gap
[12] https://www.wsj.com/articles/russian-oil-flows-but-increasingly-under-the-radar-11650541684, https://www.wsj.com/articles/why-does-the-u-s-still-buy-russian-oil-11646151935?mod=article_inline
[13] https://worldpopulationreview.com/country-rankings/wheat-production-by-country

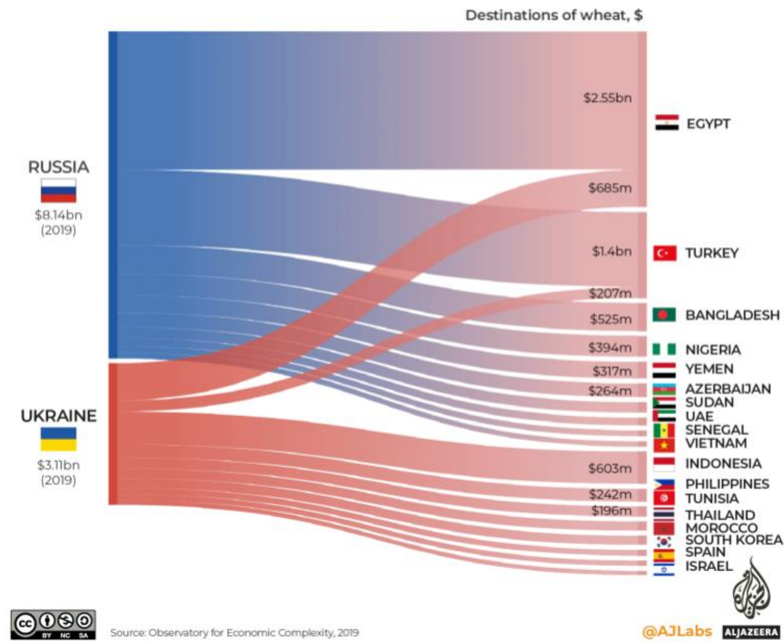



Chart 7: Importers of Russian and Ukrainian Wheat

Source: https://www.aljazeera.com/news/2022/2/17/infographic-russia-ukraine-and-the-global-wheat-supply-interactive

Prices to the end of April 2022 of major commodities affected by the Russia—Ukraine conflict:

Chart 8: Natural gas near term futures, trade on NYMEX, priced in USD/MMBtu

Source: https://tradingeconomics.com

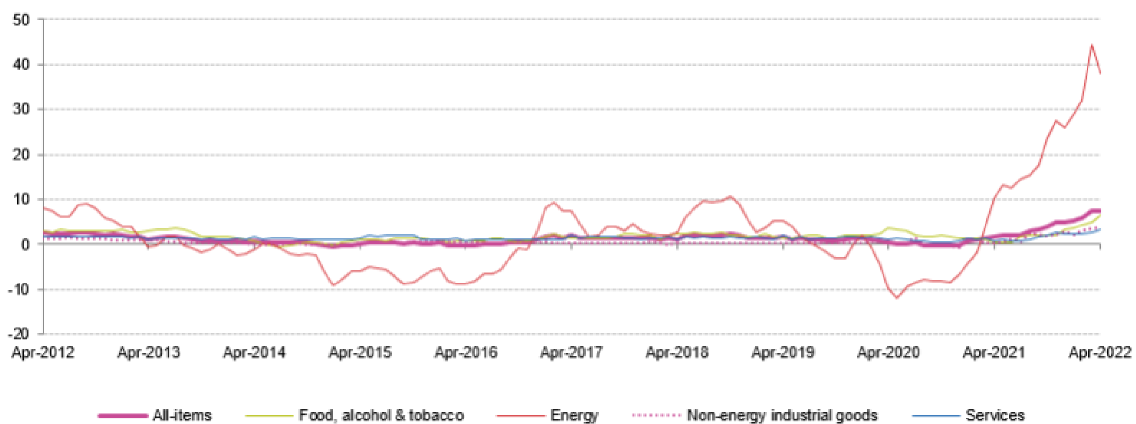
Chart 9: Wheat near term futures, traded on CBT, priced in UScents/bushel

Source: https://tradingeconomics.com

These price increases have had a dramatic effect on inflation, especially in the Euro region. As energy is such a large part of GDP, price spikes in natural gas have an outsized effect on inflation. Wheat and other agricultural commodities that have seen sharp price rises – e.g., soybeans and sunflower seeds – will have the same effect downstream for some time to come.

In the Euro area, the main driver of inflation has been energy prices. The chart below shows this:

**Euro area annual inflation and its main components, April 2012 - April 2022 (estimated)**
(%)




*Source:* Eurostat (online data code: prc_hicp_manr)

Chart 10: Components of Euro Inflation over time

Source: https://ec.europa.eu/info/index_en. Eurostat: euroindicators: 37-2022. Inflation March 2022 Document: 2-01042022-AP-EN.pdf

The US has seen a similar breakout of inflation with the main driver being energy:

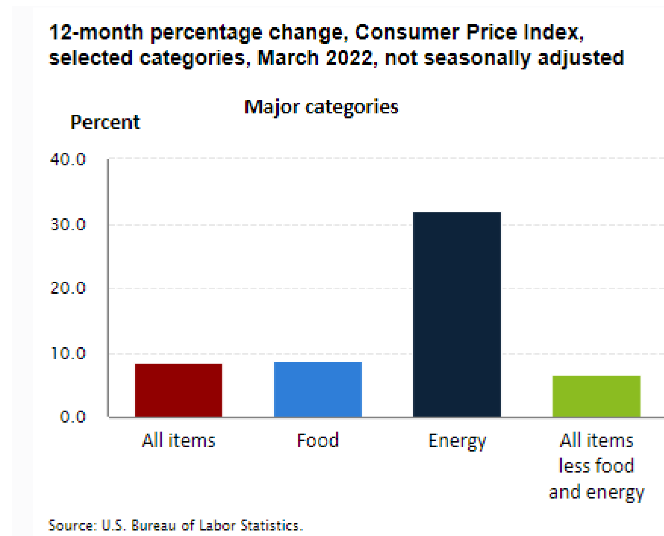



Chart 11: Components of US Inflation: Last 12 Months

Source: https://www.bls.gov/cpi/

Inflation is trending up everywhere, even in Japan which was in a deflationary environment[14] until Q3 2021. (Australian data is reported quarterly, others monthly.)

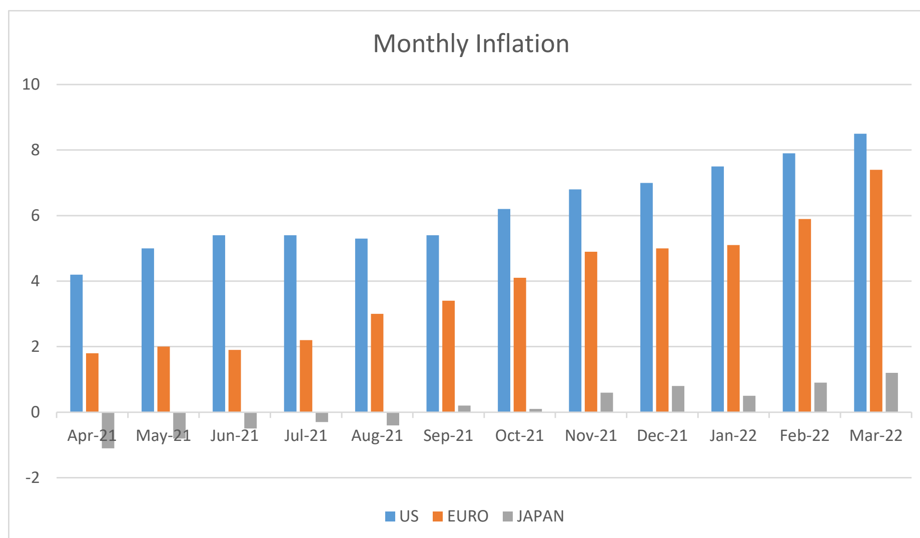



Chart 12: Last 12 months' annualised monthly inflation for US, Euro and Japan

Sources: https://tradingeconomics.com/, US Bureau of Labor Statistics, Eurostat, Japan Ministry of Internal Affairs and Communications

[14] A deflationary environment refers to a period of deflation also known as negative inflation. This is characterised by the general decrease in the price of goods and services.

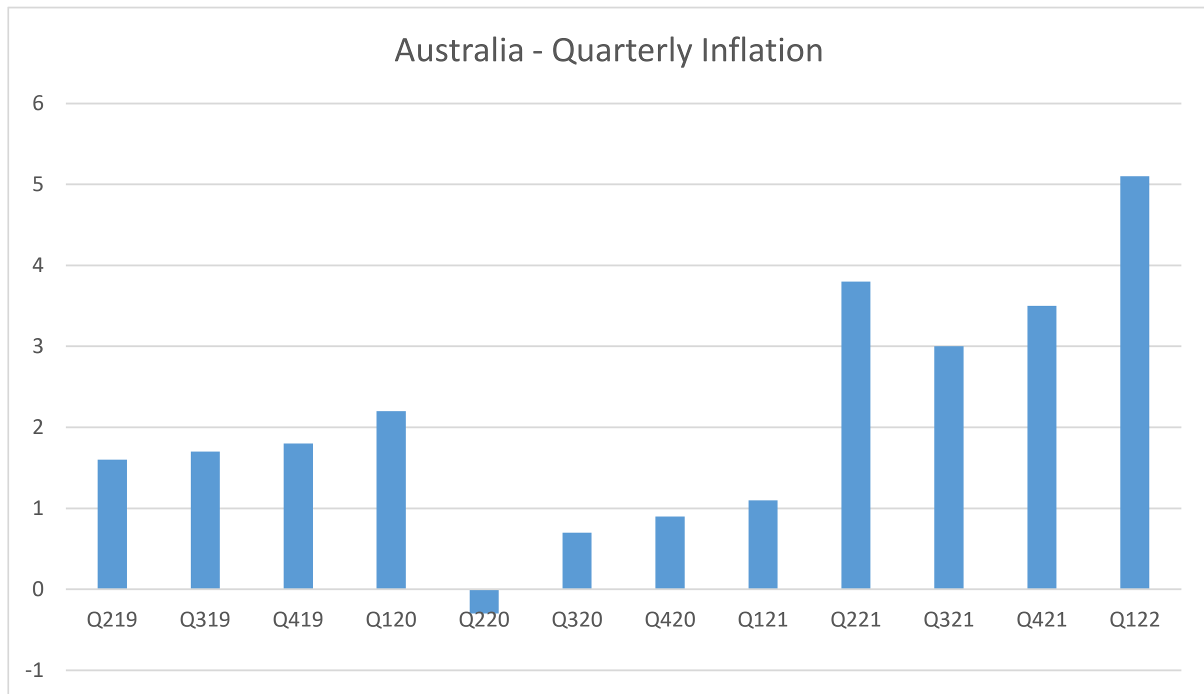
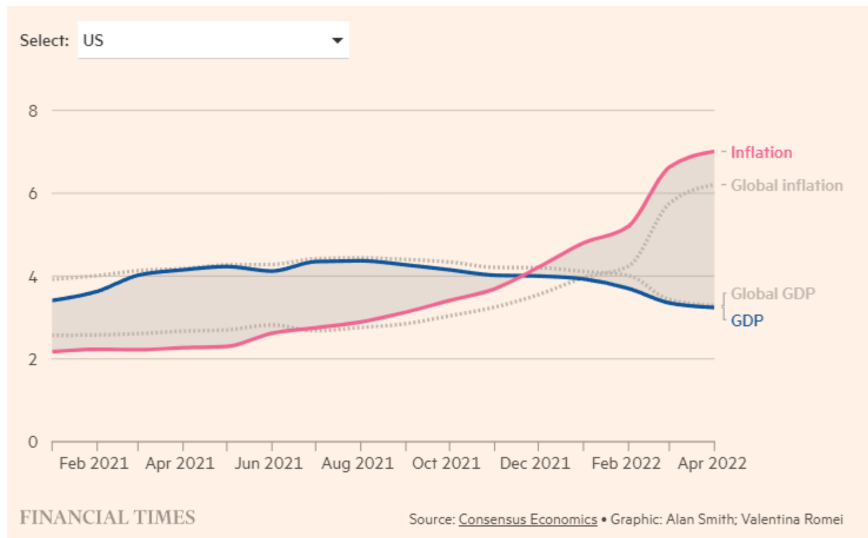


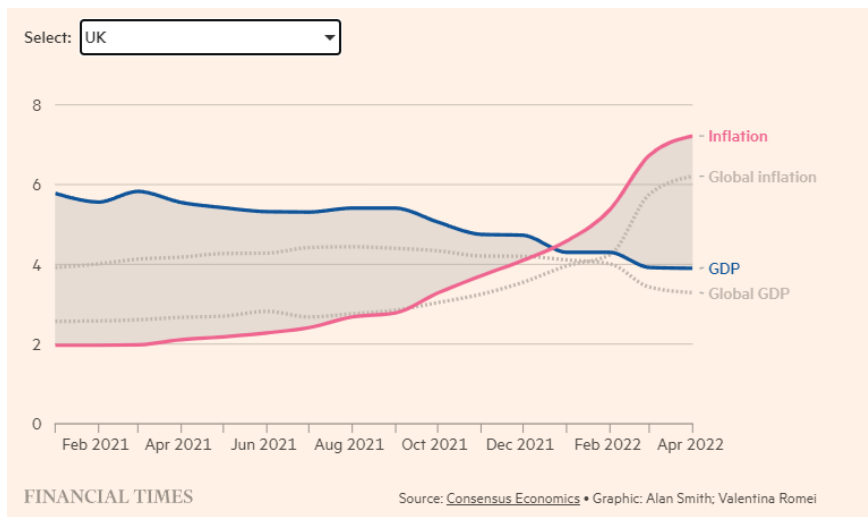

Chart 13: Last 12 quarters' annualised quarterly inflation for Australia

Sources: https://tradingeconomics.com/, Australian Bureau of Statistics

**Risk of recession**

While inflation has picked up strongly, it has been due to supply side effects (supply chain, supply restrictions) rather than increased demand. Indeed, demand has been somewhat sluggish, and GDP has fallen somewhat as inflation has picked up. We can see this from the charts below. Australia is less affected than the US and UK, largely due to materials demand from China.



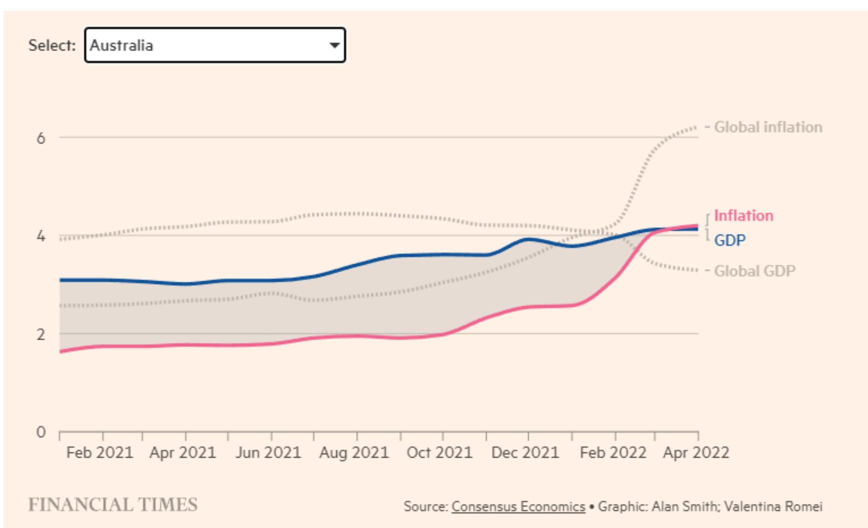




Chart 14: Inflation v GDP in US, UK and Australia

Source: https://www.ft.com/content/d490ef4e-3187-471e-84ff-9c065871a1a5

The risk of an economic slowdown is high – we are already seeing it. Some market commentators, and even European central banks and large corporates[15], are warning of sharp economic slowdowns when the full effects of the Russia-Ukraine conflict and the Chinese lockdowns are felt. This is seen to be much more likely in Europe (more heavily dependent on Russian gas) than in the US.

While a full global recession is less likely at the moment, the ingredients are there.[16]

## What has Value done?

As we noted earlier, and in our original paper on Inflation and Value, there is a fairly well-known, positive relationship between the returns to Value and inflation. This relationship is by no means simple, and was probably greater in the high inflation period of the 1970s when oil prices were very high and inflation was not targeted by central banks, as it is today.

However, we can make two fairly clear conclusions on this relationship, both of which relate to events we are seeing today:

1. **Inflation is up, is sticky and is expected to stay high for some time.** We know that higher inflation means higher nominal interest rates, and higher cost of debt for companies. Companies that rely on longer dated cash flows for their valuation – so-called "long duration" companies – are much more affected by increases in interest rates than those with shorter duration. As a result, these longer duration names – typically, the expensive Growth stocks - are devalued and sold off more than shorter duration stocks, which are typically the cheaper Value-style companies. In this scenario, Value outperforms Growth. As we note below, this is indeed what we are seeing.

2. **Economic growth expectations are muted.** When projections of expected growth and future cashflows are positive, the market is willing to pay up for expensive stocks; it is betting that things will go well. This is fine in an environment of stable growth, low interest rates and inflation, and increased opportunities presented by world trade. However, if this growth is interrupted (as it now has been) the expectations are now less optimistic, and expensive companies that had been expecting stable, long-term growth are sold off, in favour of companies with more certain short term opportunities, especially those that are cheaper. The result is a sell down of Growth compared to Value.

[15] https://www.cnbc.com/2022/05/06/we-see-a-big-recession-in-the-making-top-ceos-fear-worst-in-europe.html

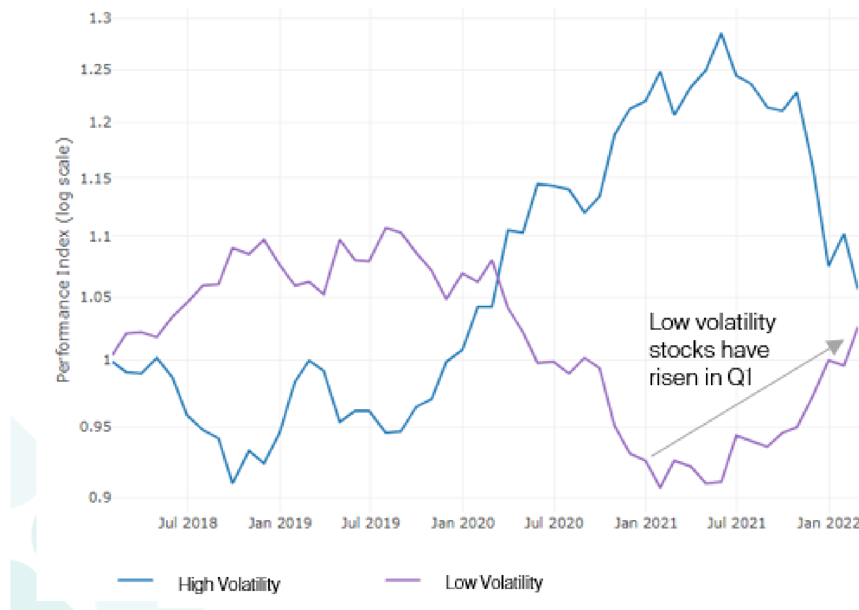
[16] https://www.project-syndicate.org/commentary/economic-recession-risk-in-china-united-states-europe-by-kenneth-rogoff-2022-04, https://edition.cnn.com/2022/04/26/economy/inflation-recession-economy-deutsche-bank/index.html, https://www.abc.net.au/news/2022-04-21/recession-warning-bond-market-economic-downturn/101001956, https://www.imf.org/en/News/Articles/2022/04/22/tr04222022-european-department-regional-economic-outlook-press-briefing, https://www.ft.com/content/d490ef4e-3187-471e-84ff-9c065871a1a5

In combination, these two effects have played out as expected. Value has significantly outperformed Growth over the last 6-9 months in most markets. The charts below show this.

The first chart below shows that the performance of Value and Growth (measured here as the top and bottom quintiles of Book to Price[17]) stopped diverging in the middle of 2021, and Value has had a resurgence since that time. However, as the second chart shows, the story has also been about certainty, as discussed above. Low volatility (i.e. low risk) stocks have significantly beaten high volatility/risk names since the middle of last year.

We have thus seen a two-fold rotation – away from *expensive* Growth to *cheaper* Value, and away from *risky* Growth to more *stable* Value.

The next four charts break down this difference in performance across the All World, Developed Markets, Emerging Markets and Australian universes since the start of 2022. In each case, the outperformance of Value over Growth has been stark.




[17] Book to Price is a valuation metric that compares a company's current market value to its book value.

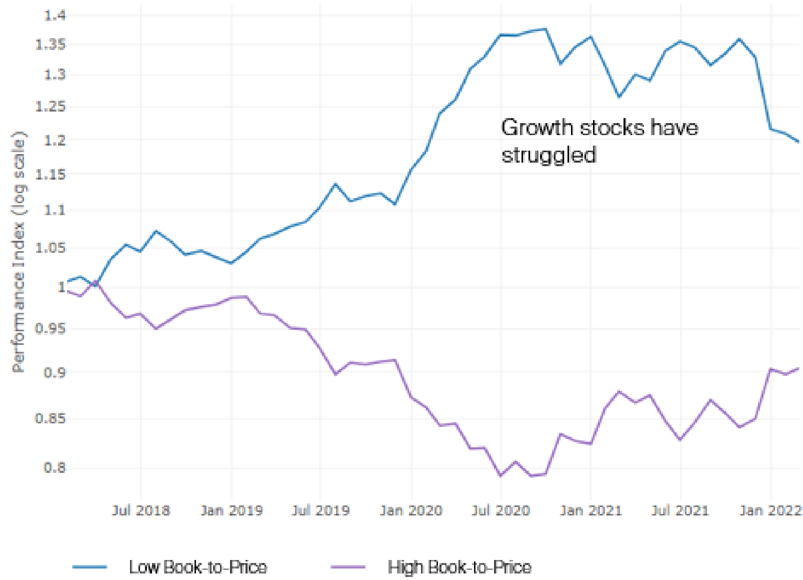



Chart 15: Recent Performance: Low Vol v High Vol and Cheap v Expensive

Source: Realindex, Factset. Data as at 31 March 2022

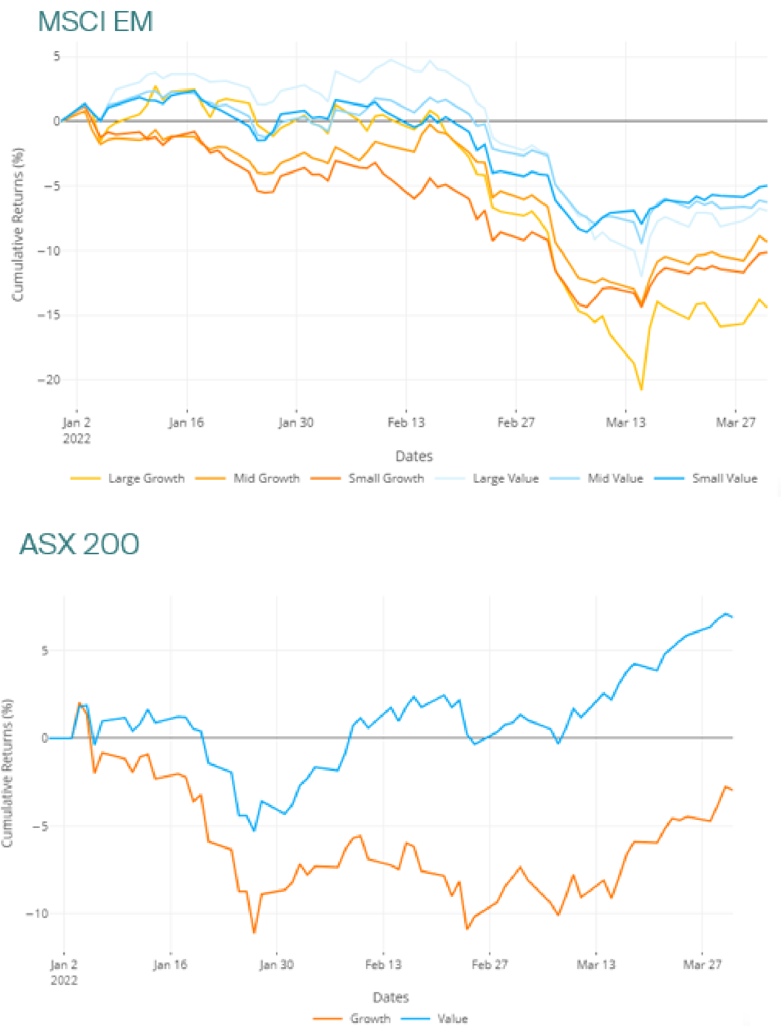



Chart 16: Outperformance of Value over Growth has been everywhere since the start of 2022

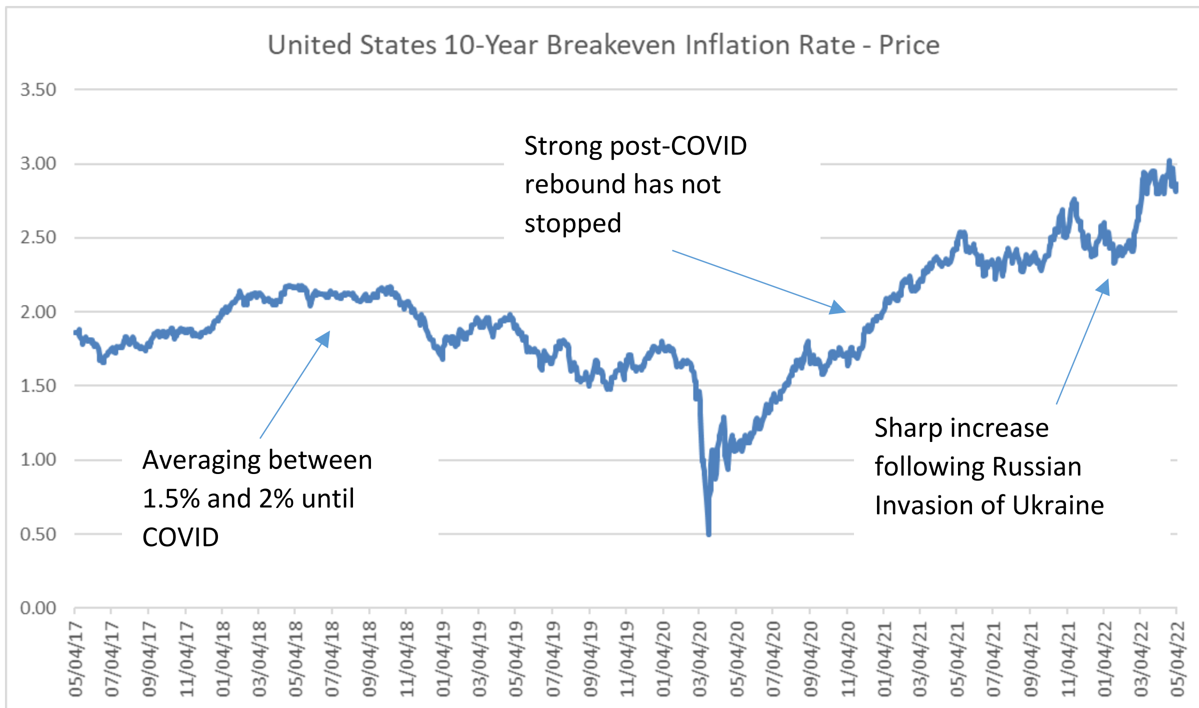
Source: Realindex, Factset. Data as at 31 March 2022

## Do we expect it to continue?

Our analysis from the previous paper suggests that both realised and expected inflation were potentially related to the performance of the Value style. Increases in realised or expected inflation tend to be correlated with a positive relative return to Value when compared to Growth.

The standard measure in the industry for forecast or expected inflation is known as "bond breakeven inflation rate" (BBIR), which is the difference between a nominal bond yield and an inflation linked bond yield of the same maturity.[18] Data for 5 and 10 year bond maturities exists – the charts below show the 10-year BBIR over a period of five years to early May 2022, and the performance of Value and Growth relative to the MSCI ACWI over the same period.

[18] http://www.inflation-linked.com/breakeven.html



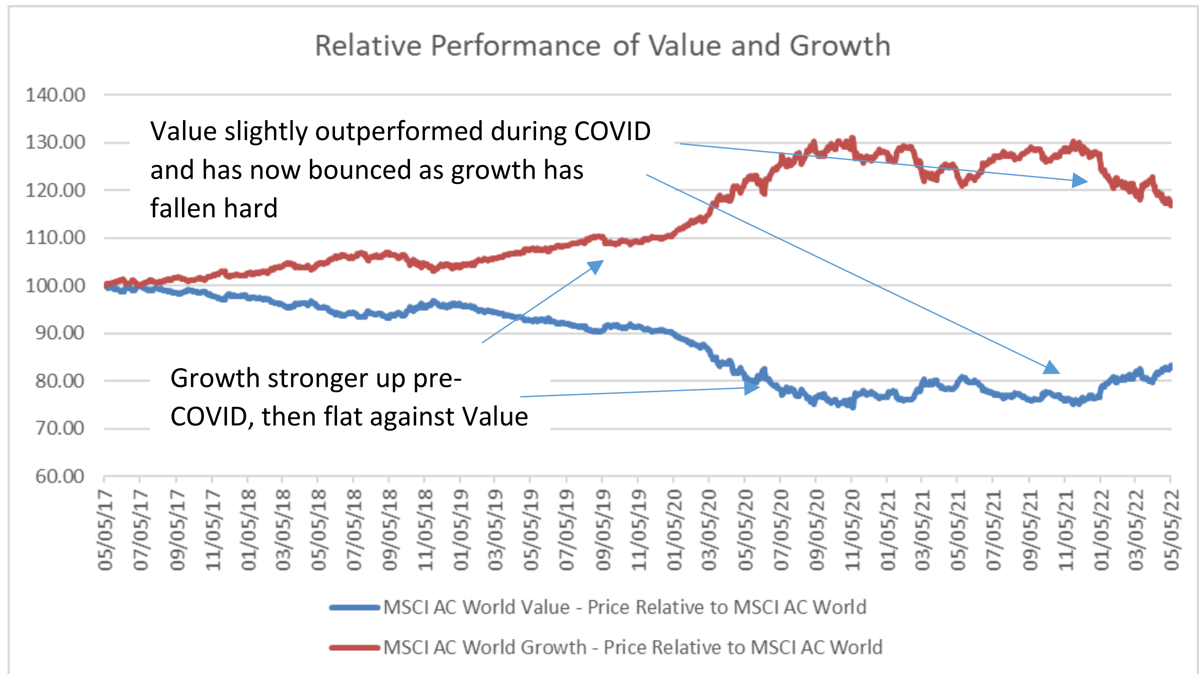




Chart 17: Breakeven Inflation and the Value-Growth Spread

Source: Realindex, Factset. Data as at 5 May 2022

Prior to COVID, an average inflation rate of around 2% was expected by the market over the following 10 years. With COVID, this fell sharply as economic contraction was likely. Since then it has rebounded, passed back through 2% and is now approaching 3%. In the most recent two months, the BBIR has spiked from 2.5% to near 3%.

The recent outperformance of Value has tracked some of this change in inflation expectations, more because of the sell-off in Growth than a strong bounce in Value (although this has happened too).

Realindex Value fund performance has been particularly good recently as well, as inflation expectations have picked up and then accelerated since the Russian-Ukraine conflict began.

| Realindex Net Performance | 3 months | 6 months | 1 Year | 3 Years p.a. | 5 Years p.a. | 10 Years p.a. | Since Inception p.a. |
|---|---|---|---|---|---|---|---|
| Australian Large Companies | | | | | | | |
| Realindex Australian Share - Class A (Net return) | 11.31% | 9.38% | 14.33% | 10.86% | 9.35% | 10.46% | 10.69% |
| ASX 200 Accum | 8.24% | 3.59% | 10.16% | 9.42% | 8.81% | 9.90% | 9.99% |
| ***Outperformance*** | ***3.06%*** | ***5.79%*** | ***4.17%*** | ***1.44%*** | ***0.54%*** | ***0.55%*** | ***0.70%*** |
| | | | | | | | |
| Australian Small Companies | | | | | | | |
| Realindex Australian Small Companies - Class A (Net return) | 7.34% | 2.71% | 10.19% | 9.87% | 9.82% | 10.78% | 11.77% |
| ASX Small Ords Accum | 3.68% | -4.61% | 2.91% | 7.64% | 9.62% | 5.96% | 8.00% |
| ***Outperformance*** | ***3.66%*** | ***7.31%*** | ***7.28%*** | ***2.23%*** | ***0.19%*** | ***4.82%*** | ***3.77%*** |
| | | | | | | | |
| Global Shares | | | | | | | |
| Realindex Global Share Fund (Screened) – Class A (Net return) | -7.03% | 0.71% | 8.54% | 8.64% | 9.52% | | 9.29% |
| MSCI AC World ex AU Net | -9.55% | -6.82% | 2.62% | 9.06% | 10.63% | | 10.12% |
| ***Outperformance*** | ***2.52%*** | ***7.53%*** | ***5.92%*** | ***-0.42%*** | ***-1.11%*** | | ***-0.83%*** |
| | | | | | | | |
| Realindex Global Share - Class A (Net return) | -9.17% | -0.58% | 6.68% | 7.89% | 9.06% | 12.31% | 9.40% |
| MSCI AC World ex AU Net | -9.55% | -6.82% | 2.62% | 9.06% | 10.63% | 13.56% | 10.26% |
| ***Outperformance*** | ***0.38%*** | ***6.24%*** | ***4.06%*** | ***-1.17%*** | ***-1.57%*** | ***-1.24%*** | ***-0.87%*** |
| | | | | | | | |
| Global Shares Hedged | | | | | | | |
| Realindex Global Share Hedged - Class A (Net return) | -4.87% | -2.63% | 2.81% | 7.76% | 7.83% | 10.07% | 11.66% |
| MSCI AC WI Net ex AU AUD H | -7.56% | -10.34% | -3.39% | 8.64% | 9.11% | 11.13% | 12.30% |
| ***Outperformance*** | ***2.69%*** | ***7.71%*** | ***6.20%*** | ***-0.88%*** | ***-1.29%*** | ***-1.06%*** | ***-0.64%*** |
| | | | | | | | |
| Emerging Markets | | | | | | | |
| Realindex Emerging Markets - Class A (Net return) | -9.81% | -3.89% | -3.46% | 1.80% | 5.18% | 6.15% | 4.24% |
| MSCI EM Net | -11.22% | -9.26% | -11.23% | 1.92% | 5.39% | 6.90% | 4.84% |
| ***Outperformance*** | ***1.42%*** | ***5.37%*** | ***7.76%*** | ***-0.12%*** | ***-0.21%*** | ***-0.74%*** | ***-0.60%*** |

Table 1: Realindex fund performance

Source: Realindex, FSI as at 30 April 2022 - *Past performance is no indication of future performance*

We cannot of course draw a direct link between expected inflation and future performance of Value, although there is clearly a strong recent relationship. However, while Value has done well recently, the cumulative outperformance of Growth over Value over the last decade is still much larger. The

first chart below shows the proportion of Expensive names (bottom 20% by Book to Price) in the MSCI Developed Markets index, compared to Cheap names (top 20% by Book to Price). The growth in weight of Expensive names has been very strong since about 2015, and has not reverted very much in 2022. The weight to Cheap has also not increased greatly, although it does appear to have stopped falling.

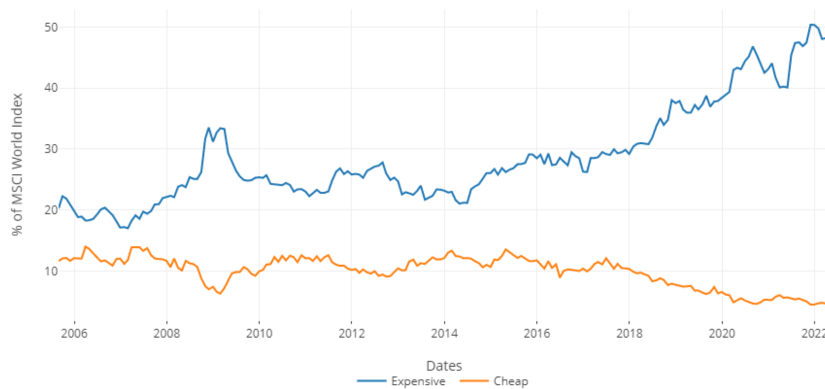



Chart 18: Weights to Expensive and Cheap stocks in MSCI Developed Markets index

Source: Realindex, Factset. Data as at 31 March 2022

We can also see that the trend in spreads of Valuation metrics has only corrected a little. The following chart shows the average Price to Book of all stocks in the MSCI Developed Markets index, sorted into quintiles by Price to Book. The most expensive stocks have reverted somewhat, but are still a long way above the long term average, and we would expect them to revert further.

All of this gives us some comfort that the Value resurgence still has a long way to run.

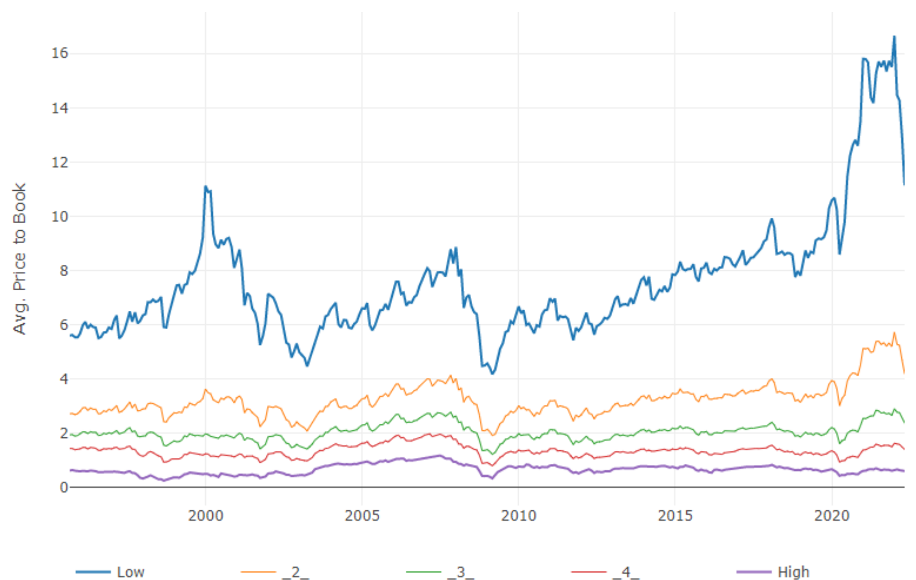



Chart 19: Average Price to Book in MSCI Developed Markets index

Source: Realindex, Factset. Data as at 31 March 2022

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